

The opinion in support of the decision being entered today was *not* written for publication in a law journal and is *not* binding precedent of the Board.

Paper No. 24

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte MICHAEL L. RANCOUR, MARK E. TROUTMAN, and  
ALBERT L. TERVALON III

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Appeal No. 1998-0206  
Application No. 08/550,514

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ON BRIEF

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Before HAIRSTON, KRASS, and BLANKENSHIP, Administrative Patent Judges.

BLANKENSHIP, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of Claims 1-16, all the claims in the application.

We reverse.

### BACKGROUND

The invention is directed to a magnetic disk drive with an electrically conducting path between the gimbal assembly and the transducing head assembly for electrical grounding of the head assembly to prevent static electricity. Claim 1 is reproduced below.

1. A magnetic disc drive for reading and writing information on a disc surface of a rotating magnetic disc, comprising:

a drive chassis forming an electrical ground;

a head assembly including a transducing head for reading and writing information on the disc surface, the head assembly further including a slider having a slider surface adapted to fly over the disc surface as the disc rotates wherein the transducing head is connected to the slider;

an electrically conductive armature extending across the disc surface having a first end electrically connected to electrical ground and a second end for carrying the head assembly;

a gimbal assembly at the second end of the armature and connected to electrical ground;

an adhesive which adheres the head assembly to the gimbal assembly; and

an electrically conductive metal path affixed to one of the slider and the gimbal assembly, and providing an unbonded electrical connection to the other of the slider and gimbal assembly, the metal path being electrically isolated from the transducing head and sandwiched between the head assembly and the gimbal assembly thereby coupling the head assembly to electrical ground, wherein the metal path is positioned between the head assembly and the gimbal assembly.

The examiner relies on the following references:

Ainslie et al. (Ainslie)

4,761,699

Aug. 2, 1988

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Matsuzaki

5,001,583

Mar. 19, 1991

Claims 1-16 stand rejected under 35 U.S.C. § 103 as being unpatentable over Matsuzaki and Ainslie.

We refer to the Final Rejection (Paper No. 15) and the Examiner's Answer (Paper No. 23) for a statement of the examiner's position and to the Brief (Paper No. 22) for appellants' position.

### OPINION

In the Final Rejection, Claims 1-16 were rejected under 35 U.S.C. § 103 as being unpatentable over Matsuzaki and Ainslie. Subsequent to the Final Rejection, the independent claims (1 and 6) were amended in accordance with the submission filed February 3, 1997 (Paper No. 18).<sup>1</sup> Material was added to the independent claims, including provision of an “unbonded electrical connection” between the slider and gimbal assembly.

Appellants argue in the Brief that the combination of Matsuzaki and Ainslie fails to disclose or suggest all the features of the appealed claims; in particular, an “unbonded electrical connection.” The corresponding language in the claims is believed to distinguish over the “solder balls and pad taught by Ainslie,” which provide “both a mechanical and electrical connection.” (Brief, page 9.)

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<sup>1</sup> We note an informality in the amendment of February 3, 1997, in that the amendments to Claims 1 and 6 merely show deletions with respect to a previously submitted amendment that was not entered (amendment filed January 8, 1997, Paper No. 16), rather than insertions and deletions with respect to Claims 1 and 6 as they stood after the amendment filed September 16, 1996 (Paper No. 14).

In the Answer the examiner sets out a rejection on pages 4 through 8, using the same references as in the Final Rejection. The examiner relies on Ainslie for disclosure of “electrically [sic] metal conductors (70, 700) affixed to the slider 16 and in directly abutting contacted [sic] with the gimbal assembly and which is sandwiched between a gimbal assembly and a head assembly....” (Answer, page 5.) “[D]irect abutting contact” language was present in Claims 1 and 6 at the time of the Final Rejection. However, the language was deleted by the later amendment.

The examiner admits, at the bottom of page 5 of the Answer, that neither reference discloses an “unbonded” electrical connection as now claimed. No additional reference, or other evidence, is applied to show obviousness of the claimed subject matter. Instead, the examiner states that “[o]ne of ordinary skill in the art would have been motivated to replace the ‘bonded’ conductors of Matsuzaki with ‘unbonded’ conductors to reduce the resistivity of the conductors in order to improve conductivity and to reduce the thickness of the head assembly.” (Id. at 6.)

The rejection is flawed on its face. In the first place, it is unstated what the “bonded” conductors of Matsuzaki may be. The examiner points to “conductor paths (25, 26)” (id. at 4), then states that Matsuzaki does not disclose that “conductors (25, 26) are made of electrically [sic] metal” (id. at 5). The examiner later refers to “electrically [sic] metal conductors (70, 700) affixed to the slider 16” in Ainslie. (Id.) Matsuzaki reveals, in column 4, lines 37 through 43, that structures 25 and 26 are “[b]eam lead conductors” connecting conductors 236, 237 to electrodes 248, 249. Ainslie discloses,

with particular emphasis at column 7, lines 25 through 51, that solder contact pads 70 on slider 16 facilitate mechanical and electrical connection of slider 16 to conductive layer 44 of suspension 40, by means of solder balls 80, effectively grounding transducer 13 (Figure 2). The examiner offers insufficient explanation as to how the requirements of independent Claims 1 and 6 may be rendered obvious in view of the two disclosures.

The second problem with the rejection is that the motivation for replacing “bonded” with “unbonded” conductors appears to be an unfounded assertion. There is no evidence of record -- such as additional references -- to serve as a basis for the asserted facts. Finally, even if the artisan would have been motivated to “reduce the resistivity of the conductors” and “to reduce the thickness of the head assembly,” there is insufficient evidence for concluding that the prior art, as represented by the disclosures of Matsuzaki and Ainslie, would have led the artisan to the claimed invention. Accordingly, we do not sustain the Section 103 rejection of Claims 1-16.

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CONCLUSION

The rejection of Claims 1-16 is reversed.

REVERSED

KENNETH W. HAIRSTON  
Administrative Patent Judge

ERROL A. KRASS  
Administrative Patent Judge

HOWARD B. BLANKENSHIP  
Administrative Patent Judge

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